



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
ENVIRONMENTAL
MANAGEMENT

Additional Basin to Support Hanford Tank Waste Treatment Nearly Complete

August 23, 2022



The four retention basins at the Liquid Effluent Retention Facility on the Hanford Site, as seen in September 2021, at top, and July 2022, with the nearly completed Basin 41 on the far left.

RICHLAND, Wash. – Workers are nearing completion of a fourth basin needed to ensure adequate storage for wastewater during tank waste treatment on the [Hanford Site](#).

Crews with **EM Office of River Protection** tank operations contractor Washington River Protection Solutions (WRPS) have made significant progress on Basin 41 at the **Liquid Effluent Retention Facility** (LERF) since concrete was first poured for the perimeter one year ago.

Watch this [time-lapse video](#) of the LERF Basin 41 construction.



Liquid Effluent Retention Facility Basin 41 on the Hanford Site is one of four basins, each capable of holding nearly 8 million gallons of wastewater.

LERF stores wastewater generated from several site sources, including the **242-A Evaporator**, which evaporates water from tank waste, solid waste disposal facilities and various site cleanup activities. The wastewater is eventually processed through the Effluent Treatment Facility, and treated water is sent to Hanford's State-Approved Land Disposal Site.

The fourth basin will add capacity to support treating additional wastewater generated when tank waste treatment begins. Each basin is roughly the length of a football field and nearly twice as wide, and can hold nearly 8 million gallons of wastewater.

“The LERF basins are an essential part of the **Direct-Feed Low-Activity Waste** Program to treat tank waste,” said Bibek Tamang, EM LERF program manager. “Once started, the Waste Treatment and Immobilization Plant (**WTP**) is expected to transfer an estimated 4.5 million gallons of wastewater a year to LERF, while the **Integrated Disposal Facility** will add another 1.3 million gallons annually.”



Crews with Washington River Protection Solutions work on the second of two liner systems at Liquid Effluent Retention Facility Basin 41 on the Hanford Site.

The bottom of the basin has multiple liners on top of drainage gravel. Crews are installing a floating cover, which is resistant to chemicals, contamination, temperature extremes and ultraviolet light. Once the cover is in place, hardware will be installed around the perimeter to allow the floating cover to move as it floats on the surface of the stored wastewater.

“We understand the important role the LERF basins play in the tank waste treatment mission, and it gives the workforce great pride to safely deliver this project,” said Scott Anderson, WRPS project manager.

Construction and operational testing will follow completion of fieldwork on the new basin this fall.